

Engine Icing

Completed Technology Project (2015 - 2021)



Project Introduction

The Engine Icing challenge predicts the likelihood of icing events with 90% probability in current engines operating in ice crystal environments to enable icing susceptibility assessments of advanced ultra-efficient engines.

Anticipated Benefits

Enables analysis of ice crystal icing effects on turbofan engines. Assists in the development of design tools to be adapted for N+3 technologies, compact core, higher bypass ratio turbofan engines to assess icing impacts during design/development phases.

Primary U.S. Work Locations and Key Partners



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Organizational Responsibility

Responsible Mission Directorate:

Aeronautics Research Mission Directorate (ARMD)

Lead Center / Facility:

Glenn Research Center (GRC)

Responsible Program:

Advanced Air Vehicles

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Organizations Performing Work	Role	Type	Location
★ Glenn Research Center(GRC)	Lead Organization	NASA Center	Cleveland, Ohio
● Armstrong Flight Research Center(AFRC)	Supporting Organization	NASA Center	Edwards, California
Honeywell Aerospace	Supporting Organization	Industry	
National Research Council of Canada(NRC)	Supporting Organization	Industry	Ottawa, Outside the United States, Canada
U.S. Air Force Academy	Supporting Organization	Academia	U S A F Academy, Colorado
Williams International	Supporting Organization	Industry	

Project Website:

<https://www.nasa.gov/aeroresearch/programs/aavp/aatt>

Project Management

Program Director:

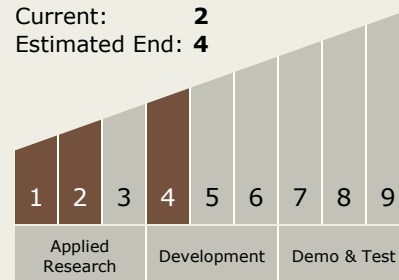
James A Kenyon

Project Manager:

James D Heidmann

Technology Maturity (TRL)

Start: **1**
 Current: **2**
 Estimated End: **4**



Technology Areas

Primary:

- TX01 Propulsion Systems
 - TX01.3 Aero Propulsion
 - TX01.3.11 Engine Icing

Target Destination

Earth